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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/584,746

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EXAMINER

CHEN, VIVIAN

ART UNIT

PAPER NUMBER

1794

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12/11/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/584,746	Applicant(s) ZIEGLER ET AL.	
	Examiner Vivian Chen	Art Unit 1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 09 September 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5, 7-12 and 14-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 7-12 and 14-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>9/9/2008</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 6, 13, 18-19 have been cancelled by Applicant.

Information Disclosure Statement

2. The information disclosure statement filed 9/9/2008 fails to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each cited foreign patent document; each non-patent literature publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed.

The cited foreign references are missing from the application.

Double Patenting

3. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

4. Claims 1-5, 7-12, 14-17 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over:

- (a) claims 22-41 of copending Application No. 11/576,309 (US 2007/0264514); or
 - (b) claims 1-17 of copending Application No. 11/846,964 (US 2008/0029934);
- in view of ZIEGLER ET AL (US 6,296,797),
and in view of MASUBUCHI ET AL (US 2001/0041772).

The copending Applications each claim composite bodies comprising a polyacetal component (e.g., polyoxymethylene) having an elastomeric component directly molded thereon, wherein the bond strength between the elastomeric component and the polyacetal components is at least 0.5 N/mm^2 and wherein the elastomeric component comprises a thermoplastic polyester elastomer or thermoplastic polyetherester elastomer. The elastomeric component and the polyacetal components optionally contain conventional additives (e.g., stabilizers, nucleating agents, etc.). The composites are formed by injection molding a polyacetal component, followed by injection molding the elastomer component onto and over the polyacetal component. Features not explicitly claimed are known in the prior art as disclosed by ZIEGLER ET AL '797 and MASUBUCHI ET AL.

ZIEGLER ET AL '797 discloses composite bodies comprising a polyacetal component (e.g., polyoxymethylene) having thermoplastic elastomer components directly molded thereon, wherein the bond strength between the elastomer and the polyacetal components is at least 0.5 N/mm^2 . The elastomer and the polyacetal components optionally contain conventional additives (e.g., stabilizers, nucleating agents, etc.). The composites are formed by injection molding a polyacetal component, followed by injection molding the elastomer component onto and over the polyacetal component, wherein the polyacetyl component is optionally preheated to at least 80°C to less than its melting point, and wherein the elastomer component has a typical melt

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temperature of 180-240°C, and wherein the mold temperature for the elastomer molding step is typically 20-100°C. The composite bodies form conveying and/or connectors with high durability and good dampening characteristics. (entire document, e.g., line 8-22, col. 1; line 47-50, col. 2; line 52, col. 2 to line 37, col. 3; line 60, col. 3 to line 8, col. 4; line 30-45, col. 5; line 52, col. 5 to line 2, col. 6; etc.)

MASUBUCHI ET AL discloses it is well known in the art to use thermoplastic polyetherester elastomers having a typical hardness of Shore D 32, wherein the elastomer comprises polybutylene terephthalate hard segments and polytetramethylene oxide soft segments in compositions suitable for conventional elastomer applications in order to obtain articles with advantageous flexibility, durability, heat resistance, chemical resistance, and other physical properties. (paragraphs 15-16, 20, 22, 112)

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to use known molding techniques as disclosed in ZIEGLER ET AL '797 and known elastomers as disclosed in MASUBUCHI ET AL to form the multi-component articles claimed in the copending Applications in order to obtain the optimum combination of mechanical properties, chemical and heat resistance, and other physical properties desired for specific applications. One of ordinary skill in the art would have selected the coverage and positioning of the elastomeric component depending on the specific mechanical and structural requirements for a given usage. It would have been obvious to apply multiple elastomer components on the polyacetal component (claim 9) depending on the specific structural and dampening requirements required for a specific application.

This is a provisional obviousness-type double patenting rejection.

Claim Rejections - 35 USC § 103

5. Claims 1-5, 7-12, 14-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over:
ZIEGLER ET AL (US 6,296,797),
in view of FLEXMAN ET AL (US 2004/0121175),
and in view of MASUBUCHI ET AL (US 2001/0041772).

ZIEGLER ET AL '797 discloses composite bodies comprising a polyacetal component (e.g., polyoxymethylene) having thermoplastic elastomer components directly molded thereon, wherein the bond strength between the elastomer and the polyacetal components is at least 0.5 N/mm². The elastomer and the polyacetal components optionally contain conventional additives (e.g., stabilizers, nucleating agents, etc.). The composites are formed by injection molding a polyacetal component, followed by injection molding the elastomer component onto and over the polyacetal component, wherein the polyacetyl component is optionally preheated to at least 80°C to less than its melting point, and wherein the elastomer component has a typical melt temperature of 180-240°C, and wherein the mold temperature for the elastomer molding step is typically 20-100°C. The composite bodies form conveying and/or connectors with high durability and good dampening characteristics. (entire document, e.g., line 8-22, col. 1; line 47-50, col. 2; line 52, col. 2 to line 37, col. 3; line 60, col. 3 to line 8, col. 4; line 30-45, col. 5; line 52, col. 5 to line 2, col. 6; etc.) However, the reference does not explicitly disclose the use of polyetherester elastomers.

FLEXMAN ET AL discloses that it is well known in the art to overmold polyacetal components with polyester polyether thermoplastic elastomers in order to form durable,

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delamination resistant composite articles, wherein a suitable polyester-polyether elastomer typically comprises polybutylene and polytetramethylene oxide segments and a Shore D hardness of 40. The composites have a peel strength of at least 2 lbs/in. (Example 4a; paragraphs 15, 18, 91-92)

MASUBUCHI ET AL discloses it is well known in the art to use thermoplastic polyetherester elastomers having a typical hardness of Shore D 32, wherein the elastomer comprises polybutylene terephthalate hard segments and polytetramethylene oxide soft segments in compositions suitable for conventional elastomer applications in order to obtain articles with advantageous flexibility, durability, heat resistance, chemical resistance, and other physical properties. (paragraphs 15-16, 20, 22, 112)

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to use known polyester-polyether-based elastomers as disclosed in FLEXMAN and MASUBUCHI ET AL as the elastomer component in the composites of ZIEGLER ET AL '797 in order to obtain the optimum combination of mechanical properties, delamination resistance, chemical and heat resistance, and other physical properties desired for specific applications. One of ordinary skill in the art would have selected the coverage and positioning of the elastomeric component depending on the specific mechanical and structural requirements for a given usage. It would have been obvious to apply multiple elastomer components on the polyacetal component (claim 9) depending on the specific structural and dampening requirements required for a specific application.

Response to Arguments

6. Applicant's arguments filed 9/9/2008 have been fully considered but they are not persuasive.

(A) Applicant's arguments with respect to EP '458 and MUTSUDA ET AL have been considered but are moot in view of the new ground(s) of rejection.

(B) Applicant argues that MASUBUCHI ET AL fails to cure the alleged deficiencies of the other relied upon references. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). MASUBUCHI ET AL is relied upon to illustrate the composition of conventional polyester-based elastomers and their typical hardness values. Applicant has not provided any probative evidence of criticality or unexpected results from the recited polyester-polyether based elastomers or their hardness values.

(C) Applicant argues that the provisional double patenting rejections are improper because the claimed invention is patentably distinct from the inventions claimed in the copending Applications, specifically because the '309 and '965 claims do not require a polyetherester elastomer and further require other components (EPDM rubber with compatibilizer, modified styrene-olefin block copolymer with plasticizer and/or filler, respectively). However, since the present application claims do not preclude the presence of other elastomeric components besides the recited polyetherester elastomer, the fact that the '309 and '965 claims recite additional components does not make the present application claims

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patentably distinct. Furthermore, contrary to Applicant's assertions, the '309 and '965 Applications do specify in at least some claims that the elastomer compositions contain a non-olefinic component which can be a polyetherester elastomer, as recited in the present application claims. Since the present application claims allow for the presence of other elastomeric materials and since the copending Applications recite that elastomeric compositions which contain polyetherester elastomer, the present application claims are not patentably distinct from the inventions claimed in the copending Applications, and therefore are appropriately provisionally rejected under obviousness-type double patenting.

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vivian Chen whose telephone number is (571) 272-1506. The examiner can normally be reached on Monday through Thursday from 8:30 AM to 6 PM. The examiner can also be reached on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Keith Hendricks, can be reached on (571) 272-1401. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

The General Information telephone number for Technology Center 1700 is (571) 272-1700.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

December 5, 2008

/Vivian Chen/

Primary Examiner, Art Unit 1794